TEST RESULTS OF GRADATION FOR WMM

Lab ID	:	**CP-RW-2020-01-13-34** **Date: 24-10-19**
Customer	:	Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Sub Division, BBMP, Bangalore.
Project Name	:	Providing Pot Hole Filling in Kempegowda Ward No:01
Agency	:	M/S S.M.L.P. Asphalts Prop.B.B.Umesh, No:385, Bettahalasuru Post Bangalore North.
Customer Reference	:	EE/YNK.D/EPMT-05/W.O/110/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	22-10-19
Type of Mix	:	WMM (Wet Mix Macadam)
Date of test	:	22-10-19
Oven Dry Weight	:	11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	315	315	2.9	97.1	95-100
22.4	2259	2574	23.4	76.6	60-80
11.2	2179	4753	43.2	56.8	40-60
4.75	2251	7004	63.7	36.3	25-40
2.36	1621	8625	78.4	21.6	15-30
0.6	623	9248	84.1	15.9	8-22
0.075	1752	11000	100.0	0.0	0-5

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R RUDRAPRASAD
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Technical Manager

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TEST REPORT OF AGGEGRATE IMPACT VALUE
IS: 2386 Part IV

Lab ID	:	CP-RW-2020-01-13-34	**Date: 24-10-19**
Customer	:	Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.	
Address	:	Yelahanka Sub Division, BBMP, Bangalore.	
Project Name	:	Providing Pot Hole Filling in Kempegowda Ward No:01	
Agency	:	M/S S.M.L.P. Asphalts Prop.B.B.Umesh, No:385, Bettahalasuru Post Bangalore North.	
Customer Reference	:	EE/YNK.D/EPMT-05/W.O/110/2019-20	
Source of Sample	:	Sample supplied by Agency	
Sample Condition	:	Satisfactory	
Date of Receipt	:	22-10-19	
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)	
Date of test	:	22-10-19	

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	300.2	300.2
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	73.9	74.0
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	225.9	225.8
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.4	0.4
5	Aggregate impact value	(B/A)*100	24.6	24.7
6	Aggregate impact value (Mean of two tests)	Pecentage	24.6	

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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2020-01-13-34** **Date: 24-10-19**
Customer	:	Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Sub Division, BBMP, Bangalore.
Project Name	:	Providing Pot Hole Filling in Kempegowda Ward No:01
Agency	:	M/S S.M.L.P. Asphalts Prop.B.B.Umesh, No:385, Bettahalasuru Post Bangalore North.
Customer Reference	:	EE/YNK.D/EPMT-05/W.O/110/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	22-10-19
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of test	:	22-10-19

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	12.8%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	12.5%	
Combined Flakiness and Elongation Index for WMM	25.3%	

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TEST RESULTS OF GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	CP-RW-2020-01-13-34	**Date: 08-11-19**
Customer	:	Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.	
Address	:	Yelahanka Sub Division, BBMP, Bangalore.	
Project Name	:	Providing Pot Hole Filling in Kempegowda Ward No:01	
Agency	:	M/S S.M.L.P. Asphalts Prop.B.B.Umesh, No:385, Bettahalasuru Post Bangalore North.	
Customer Reference	:	EE/YNK.D/EPMT-05/W.O/110/2019-20	
Source of Sample	:	Sample supplied by Agency	
Sample Condition	:	Satisfactory	
Date of Receipt	:	06-11-19	
Type of Mix	:	BC-Plant (Bituminous Concrete)	
Date of test	:	06-11-19	
Oven Dry Weight	:	5000 Grams	

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-17(grading-2)
19	0	0	0.0	100.0	100
13.2	89	89	1.8	98.2	90-100
9.5	702	791	15.8	84.2	70-88
4.75	895	1686	33.7	66.3	53-71
2.36	587	2273	45.5	54.5	42-58
1.18	492	2765	55.3	44.7	34-48
0.6	503	3268	65.4	34.6	26-38
0.3	528	3796	75.9	24.1	18-28
0.15	458	4254	85.1	14.9	12-20
0.075	350	4604	92.1	7.9	4-10
PAN	396	5000	100	0.0	0

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PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR BITUMINOUS CONCRETE

Lab ID : **CP-RW-2020-01-13-34** **Date: 09-11-19**

Customer : Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.

Address : Yelahanka Sub Division, BBMP, Bangalore.

Project Name : Providing Pot Hole Filling in Kempegowda Ward No:01

Agency : M/S S.M.L.P. Asphalts Prop.B.B.Umesh, No:385, Bettahalasuru Post Bangalore North.

Customer Reference : EE/YNK.D/EPMT-05/W.O/110/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 06-11-19

Type of Mix : BC (Bituminous Concrete)

Date of test : 06-11-19

Table 500-16 : Physical Requirements fo Coarse Aggregate for Bituminous Concrete

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	12.4	Combined Flakiness & Elongation Index for BC is Maximum 35%	IS:2386 Part I
	Elongation Index	11.8		
Strength	Aggregate Impact Value	22.1	Maximum 24%	IS:2386 Part IV
Specific gravity	Specific gravity	2.68	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.21	Maximum 2%	IS:2386 Part III

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	CP-RW-2020-01-13-34	**Date: 15-11-19**
Customer	:	Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.	
Address	:	Yelahanka Sub Division, BBMP, Bangalore.	
Project Name	:	Providing Pot Hole Filling in Kempegowda Ward No:01	
Agency	:	M/S S.M.L.P. Asphalts Prop.B.B.Umesh, No:385, Bettahalasuru Post Bangalore North.	
Customer Reference	:	EE/YNK.D/EPMT-05/W.O/110/2019-20	
Source of Sample	:	Sample supplied by Agency	
Date of Receipt	:	12-11-19	
Type of Mix	:	BC (Bituminous Concrete)	
Date of test	:	12-11-19	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	500
2	Weight of the sample After extraction	B	469	470
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	6.20	6.00
4	Average percentage	%	6.1	

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Lab ID : CP-RW-2020-01-13-34 **Date: 15-11-19**

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 469

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	4	4	0.9	99.1	90-100
9.5	62	66	14.1	85.9	70-88
4.75	112	178	38.0	62.0	53-71
2.36	88	266	56.7	43.3	42-58
1.18	29	295	62.9	37.1	34-48
0.6	11	306	65.2	34.8	26-38
0.3	46	352	75.1	24.9	18-28
0.15	45	397	84.6	15.4	12-20
0.075	36	433	92.3	7.7	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 470

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	4	4	0.9	99.1	90-100
9.5	62	66	14.0	86.0	70-88
4.75	112	178	37.9	62.1	53-71
2.36	88	266	56.6	43.4	42-58
1.18	29	295	62.8	37.2	34-48
0.6	11	306	65.1	34.9	26-38
0.3	46	352	74.9	25.1	18-28
0.15	45	397	84.5	15.5	12-20
0.075	39	436	92.8	7.2	4-10

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Certificate No.: TC-5548

Format No: CP/TF/01

TEST REPORT ON BITUMEN

Lab ID	:	**CP-RW-2020-01-13-34** **Date: 02-11-19**
Customer	:	Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Sub Division, BBMP, Bangalore.
Project Name	:	Providing Pot Hole Filling in Kempegowda Ward No:01
Agency	:	M/S S.M.L.P. Asphalts Prop.B.B.Umesh, No:385, Bettahalasuru Post Bangalore North.
Customer's Reference	:	EE/YNK.D/EPMT-05/W.O/110/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	31-10-19
Sample Type	:	Bitumen
Reference to BIS codes	:	IS: 1201-1220(1978) (Reaffirmed-2004)
Date of test	:	31-10-19

Test Results

Sl.no	Name of Test	Result	Requirements as per IS:73-2013
1	Penetration at 25°C , in 1/10th mm	64	60 to 70
2	Softening Point, °C	51.2	Min. 40°C
3	Ductility, cm	98	Min. 75cm
4	Flash point, °C	246	Min. 220°C
	Fire point, °C	272	

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